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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,673	05/01/2001	Michael R. Dupelle	04644-088001	4557
26161	7590	05/17/2004	EXAMINER	
FISH & RICHARDSON PC			BRADFORD, RODERICK D	
225 FRANKLIN ST			ART UNIT	
BOSTON, MA 02110			PAPER NUMBER	

3762

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DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,673

Applicant(s)

DUPELLE ET AL.

Examiner

Roderick Bradford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-35 and 39-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15, 16, 35, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Olson et al. U.S. Patent 5,409,009.

Referring to claims 15, 35, 39 and 40 Olson discloses a method for treating possible cardiac arrest comprising:

- applying a piezoelectric pulse sensor to the patient (abstract)
- processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse (column 4, lines 45-50), wherein the decision is based on outputs of the piezoelectric sensor attributable to the mechanical motion resulting from the expansion of the blood vessel (column 8, lines 7-12)
- applying electrodes of a defibrillator to the patient (abstract)
- using the pulse sensor to detect whether the patient has a pulse (column 4, lines 45-50)

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- delivering a defibrillation shock to the patient when the patient's condition, including whether the patient has a pulse, warrants delivery of the shock (column 7, lines 11-33).

Referring to claim 16, further comprising monitoring the pulse present (inherent).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 15-19, 21-24, 29, 32, 34, 35 and 39-41 are rejected under 35 U.S.C. 103(a) as obvious over Joo et al. U.S. Patent No. 6,440,082 in view of Olson et al. U.S. Patent No. 5,409,009.

Referring to claims 15, 35, 39 and 40, Joo discloses a method for treating possible cardiac arrest comprising:

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- applying a piezoelectric pulse sensor to the patient (Fig. 2 and column 4, lines 60, 61)
- applying electrodes of a defibrillator to the patient (Fig. 2)
- using the pulse sensor to detect whether the patient has a pulse (Fig. 4 and column 6, lines 45-52)
- delivering a defibrillation shock to the patient when the patient's condition, including whether the patient has a pulse, warrants delivery of the shock (column 13, lines 3-5)

Joo fails to disclose processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse, wherein the decision is based on outputs of the piezoelectric sensor attributable to sounds from opening and closing of heart valves. However, Joo states in column 14, lines 45-51 that other physiological signals may be sensed to determine the presence of a cardiac pulse.

Olson teaches processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse (column 4, lines 45-50), wherein the decision is based on outputs of the piezoelectric sensor attributable to the mechanical motion resulting from the expansion of the blood vessel (column 8, lines 7-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Joo to include processing the output of the piezoelectric sensor to make a decision as to whether the patient has a pulse, wherein the decision is based on outputs of the piezoelectric sensor attributable to the

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mechanical motion resulting from the expansion of the blood vessel, such as taught by Olson, as a more efficient means for checking and ensuring that the patient has a pulse.

Referring to claim 16, further comprising monitoring the pulse if present (column 13, lines 53-65).

Referring to claim 17, wherein the defibrillator has an ECG function and the method further comprises using the ECG of the defibrillator to monitor the patient's heart rhythm (column 5, lines 51-53).

Referring to claim 18, further comprising analyzing the pulse and heart rhythm to determine the appropriate treatment for the patient (Fig. 11).

Referring to claim 19, wherein the analyzing step includes determining whether the patient's pulse, if present, is correlated with the R-wave of the patient's heart rhythm (column 3, lines 1-7 and column 8, lines 31-36).

Referring to claims 21 and 22, wherein the analyzing step includes determining whether the ECG rhythm is treatable with defibrillation and delivering a shock to the patient using the defibrillator (column 12, lines 22-27 and column 13, lines 3-5).

Referring to claim 23, further comprising delivering a predetermined number of shocks to the patient, and then subsequently determining whether the patient's pulse, is correlated with the R-wave (column 13, lines 18-21).

Referring to claim 24, further comprising, if the subsequent determination is negative, administering CPR (column 13, lines 21-25).

Referring to claim 29, wherein the pulse sensor is mounted on one of the electrodes of the defibrillator (column 4, lines 53-55).

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Referring to claims 34 and 41, wherein the pulse sensor is attached to pulse point other than the patient's neck (Fig. 2).

7. Claims 20, 25, 26, 27, 28, 30, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joo et al. U.S. Patent No. 6,440,082 in view of Olson et al. U.S. Patent No. 5,409,009.

Referring to claims 20 and 25, Joo in view of Olson discloses the claimed invention except for wherein the determination is positive, no ECG analysis is performed and further comprising using a pulse sensor to determine the efficacy of the CPR treatment.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device as taught by Joo in view of Olson, with if the determination is positive that no ECG analysis is performed and comprising a pulse sensor to determine the efficacy of the CPR treatment since it was well known in the art that if the determination is positive then no ECG analysis will be performed as a means not to waste battery life performing unnecessary ECGs and having pulse sensors to determine the efficacy of treatment as a means to determine if the patient will need further care.

Referring to claims 26 and 31, Joo in view of Olson discloses the claimed invention except for wherein the pulse sensor comprises a piezoelectric polymer film and is self-shielded.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device as taught by Joo, with wherein the pulse

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sensor that comprises a piezoelectric polymer film and are self-shielded since it was well known in the art to use a piezoelectric polymer film and self-shielding pulse sensors as a means to reduce interference.

Referring to claims 27, 28, 30 and 33, Joo in view of Olson discloses the claimed invention except for wherein the pulse sensor is mounted on an elastic strap and further attaching the elastic strap around the patient's neck and wherein the pulse sensor further comprises a foam layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device as taught by Joo in view of Olson, with a pulse sensor mounted on an elastic strap and further attaching the elastic strap around the patient's neck and where the pulse sensor further comprises a foam layer since it was well known in the art to include a pulse sensor mounted on an elastic strap and further comprising attaching the elastic strap around the patient's neck and where the pulse sensor further comprises a foam layer as an alternate means for monitor the pulse of a patient and to provide the elastic strap so the sensor can comfortably fit and be used on different patients.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roderick Bradford whose telephone number is (703) 305-3287. The examiner can normally be reached on Monday - Friday 7 a.m. - 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (703) 308-5181. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

R. B.

R.B.

April 21, 2004

Angela D. Sykes

ANGELA D. SYKES
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